DMSMS Workshop

Commodity Management in the Department of Defense

Microelectronics Commodity

San Antonio, TX
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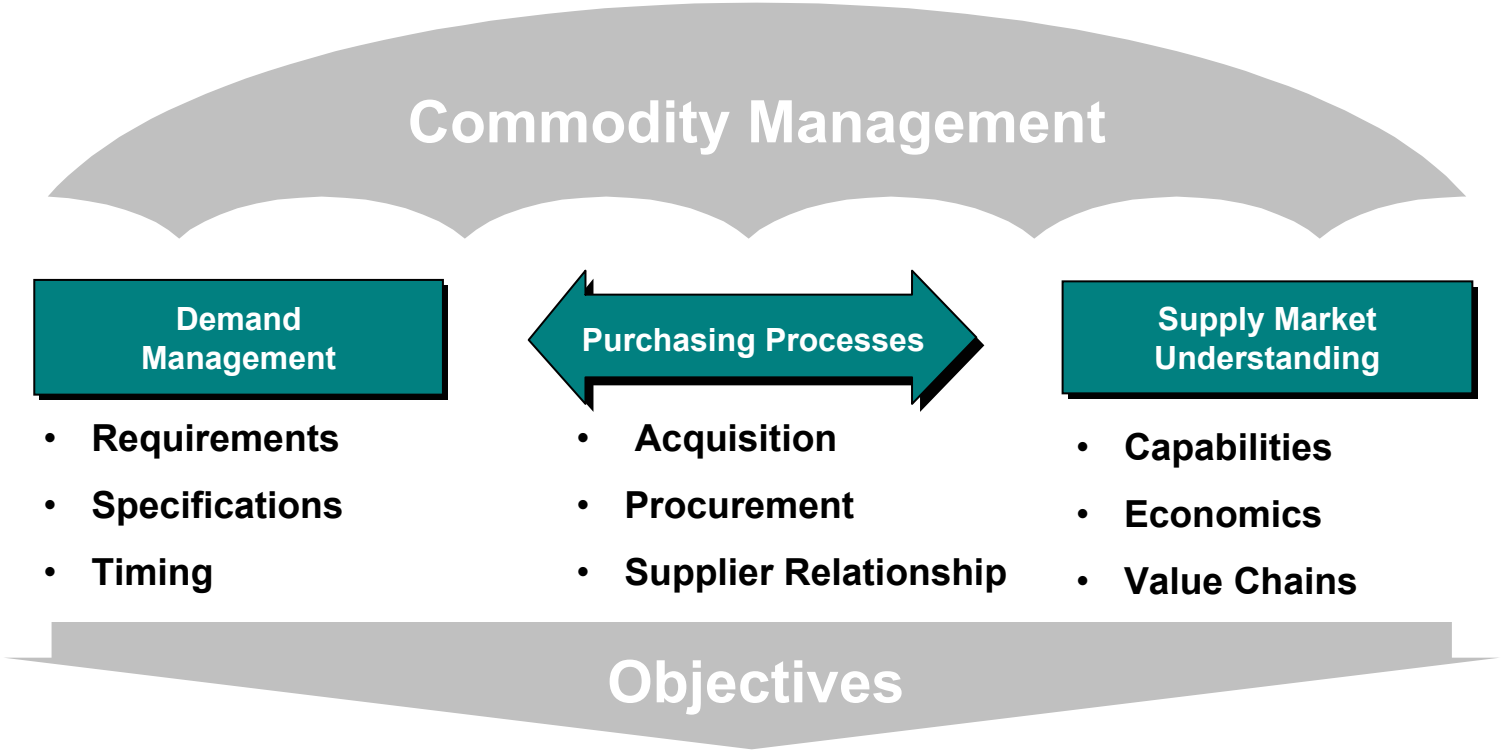
Commodity Management is a recognized industry best practice



Optimize Total Cost of Ownership

Supply Assurance and Strengthened Supply Base

Innovation Incorporated in Weapons Systems and Processes

DoD and industry have different philosophies on the use and management of microelectronics

DoD profile

- DoD spend is 0.4% of Global semiconductor market
- “Repair and Maintain strategy”
- DoD life cycles are long and shift to COTS parts has led vendors away from the DoD market
- DoD has limited influence in global market, but potential for greater influence in North American PCB market
- DoD organizations/initiatives such as DMEA, Trusted foundry program, DMSMS addressing supply/obsolescence issues
- Individual weapons system programs are responsible for their individual items

Industry trends

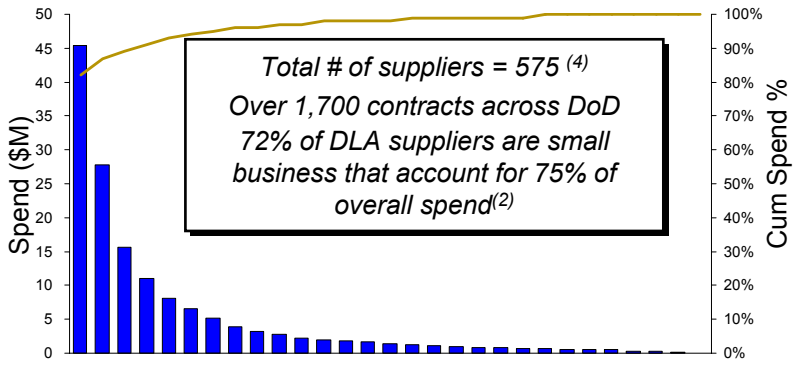
- Retail consumer driven - top global suppliers focus on automotive, wireless, consumer electronics markets
- “Throw away strategy”
- Focus on generating economies of scale
  - high volumes
  - lower cost products
  - shorter life cycles
- Fabrication capacity migrating to Southeast Asia; North American PCB capacity is down 50% over last 5 years
- Market and technological factors have led to vertical specialization

DoD microelectronics commodity characteristics

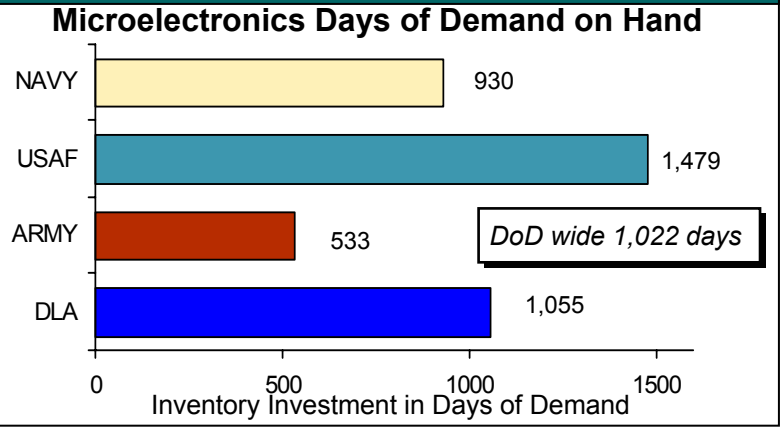
DEMAND CHARACTERISTICS

Total usage (1)		$1,094M
Total spend (2)		$728M
Total inventory (3)		$3,062M
	Microchips (Consumables, FSC 5962)	Circuit boards (Repairable, FSC 5989)
# of NSN's	74,000	169,000
Unit costs	Low cost (85%<$1000)	High cost (80%>$1000)

SUPPLY CHARACTERISTICS



INVENTORY INVESTMENT CHARACTERISTICS



PERFORMANCE CHARACTERISTICS(5)

	Microchips (Consumables, FSC 5962)	Circuit boards (Repairable, FSC 5989)
Supply Availability	88%	77%
Overall Supply Availability = 85%		
Admin Lead-time (avg. days)	61	85
Production Lead-time (avg. days)	135	214

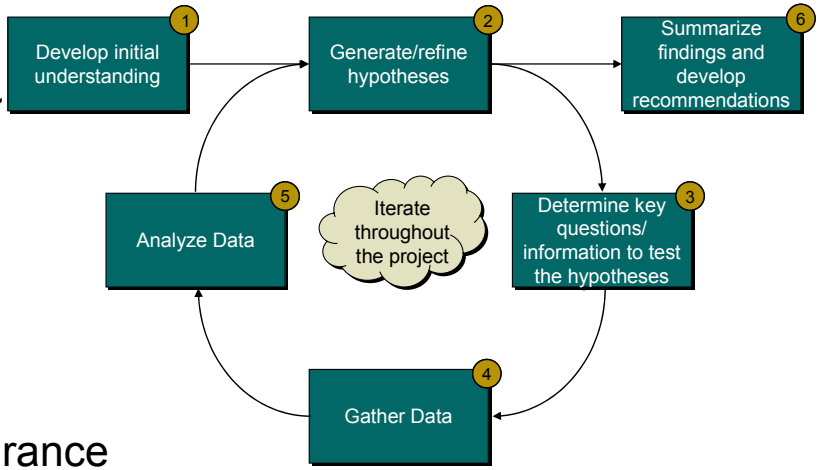
(1) CY 2004 demand, (2) CY 2004 contract spend, (3) Inventory is a snapshot as of July 2005 ; Spend lags demand (4) FY 2003 DoD Contract data from Eagle Eye Publishers; (5) CY 2004 DLA data

Initial insights reveal fragmented DoD procurement and short falls in material availability

- In 2003, 60% of microelectronics spend was with 4 traditional DoD suppliers (Lockheed Martin, Northrop Grumman, Raytheon, General Dynamics)
- Bottom 24% of spend was across 565 suppliers
- A large number of small business suppliers are available for this commodity
  - 72% of DLA vendors are small businesses
- DoD's leverage is dispersed across a large number of contracts
  - Lockheed Martin was the top supplier in 2003 with 57 contacts for $185M spend across DLA and each of the Services
  - Northrop Grumman has 93 contracts for $63M
  - Raytheon had 134 contracts for $58M
- DoD supply performance is not in line with DoD-wide inventory investment
  - 2.8 years of demand on hand (1,022 days) achieved supply availability of 85%
- Supply performance varies even within the top suppliers with only one of DLA's top 15 suppliers in each microelectronics category meeting the 85% availability target

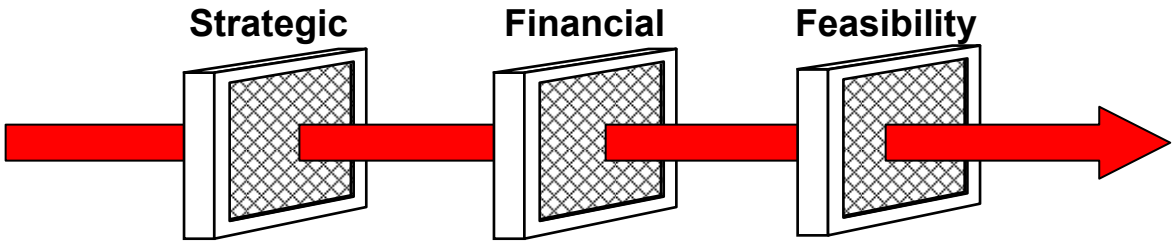
Chartered a commodity management initiative to present a DoD-wide view of the Microelectronics commodity

- Commodity team with Representation from OSD, each of Services and Agencies
- Short timeframe (5 months) operating in Virtual team structure
  - Teams collaborated via weekly conference calls, 2 on-site meetings
  - Minimal time demand on participants ~ few hours per week
- Project employed Hypothesis driven approach
  - No significant investment in data collection ~ teams leveraged existing data / reports
  - Structured, iterative process
- Clear objectives
  - Optimized Total Cost of Ownership
  - Strengthened Supply Base and Supply Assurance
  - Innovation in Weapons Systems and Processes



Continuing team effort is devoted to defining opportunities and developing strategies for DoD-wide implementation

- Defining a wide range of potential opportunities
- Evaluate and filter opportunities



- Prioritize opportunities based on their magnitude
- Develop actionable strategies for DoD-wide implementation
- Expected outcomes
  - Improved availability for the warfighter
  - Reduced administrative costs
  - Material cost savings
  - Release working capital funds for more appropriate use

Opportunities

- Streamline Contracting Process
  - Centralized contracting with decentralized ordering
  - Greater use of long term contracts
  - Leverage existing and new strategic relationships
- Eliminate duplicate NSNs
  - Review and revise NSN cataloging process
  - Consolidate duplicate NSNs
- Obsolescence Mitigation
  - Implement PBL in weapons systems contracts
  - Develop tools /methodology to demonstrate/educate PMs value of tech refresh and obsolescence mitigation
- Improve collaboration/partnering with industry
  - Establish a consolidated supply and demand planning process
  - Align DoD requirements and industry capabilities/plans